

**Notice of Allowability**

Application No.

10/697,493

Examiner

Sujoy K. Kundu

Applicant(s)

HUANG ET AL.

Art Unit

2863

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_.
2. ☒ The allowed claim(s) is/are 1-11.
3. ☒ The drawings filed on 31 October 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                               | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date ____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date ____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material         | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other ____.   |

## **DETAILED ACTION**

### ***Allowable Subject Matter***

Claims 1- 11 allowed.

## **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James A. LaBarre on April 11, 2005.

The specification and claims are hereby replaced with the following attachment:  
Date 04/14/05.

### ***Remarks***

The examiners amendment merely corrects for pagination errors. Grammar and spelling mistakes are corrected. The scope has not been changed.

### ***Pertinent Art Cited***

The following journal article reveals the current state of the art:

Huang (Journal of the Acoustical Society of America, Nov 2002, Vol. 112, No. 5, pp.2014-2025) teaches a method of designing a chamber for attachment of a duct to reduce noise in said duct, said chamber having a peripheral chamber height  $h_c$  to reduce noise in a duct having a height  $h$  by, said duct being separated from said

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chamber by a membrane having a tension  $T$  and membrane length  $L$ , including the steps of (Method of Solution, Paragraph 1, pg. 2015):

determining the radiation pressure acting on the upper surface of the membrane facing away from the chamber,  $p_{+rad}$  caused by a unit modal amplitude (Radiation and cavity reflection impedances, Paragraph 2, pg. 2016);

determining the radiation pressure acting on the lower surface of the membrane facing towards the chamber  $p_{-rad}$  caused by a unit modal amplitude (Radiation and cavity reflection impedances, Paragraph 2, pg. 2016);

determining the radiation pressure by reflection of the radiated waves into the cavity by the walls of the chamber,  $p_{-ref}$  caused by a unit modal amplitude.

### ***Reason for Allowance***

The following is an examiner's statement of reasons for allowance: Regarding Claim 1:

The primary reason for allowance of claim 1 is the inclusion of the limitations of the varying wave frequency  $f$  to calculate transmission loss TL for different  $f$ , and determine a frequency range  $f_1$  to  $f_2$  from the transmission loss TL within  $f_1$  to  $f_2$  is higher than or equal to a threshold transmission loss  $TL_{cr}$ . It is these features found in the claim, as they are claimed in the combination that has not been found, taught, or suggested by prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sujoy K. Kundu whose telephone number is 571-272-8586. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SKK  
04/13/2005

  
John Barlow  
Supervisory Patent Examiner  
Technology Center 2800